

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-23 (Previously Cancelled)

DL

24. (Currently Amended) A method for the rapid fabrication and reproduction of molds and mold components comprising ~~the steps of~~:

- a. creating a cavity and core patterns of a mold;
- b. ceramic injection molding a homogeneous dispersion of ceramic powder or powders in an organic binder around each version of the cavity and core pattern, ~~thereby forming to form~~ a corresponding die block part as a green article wherein said ceramic powder or powders of said green article are not sintered;
- c. processing said green article to consolidate the ceramic powder or powders including a means for debinding said binder of said ~~ceramic~~ dispersion and forming a sintered ceramic mold;
- d. inserting said ceramic mold into a mold base or master mold insert ~~for adapted~~ ~~for use in~~ molding ~~of~~ metals, ceramics or plastics.

25. (Currently Amended) The method of Claim 24 wherein the ceramic powder or powders used to produce said ceramic molds ~~is/are are~~ selected from the group of oxides, carbides, nitrides and other ceramic powders that ~~can are adapted to~~ be processed to near full density.

26. (Currently Amended) The method of Claim 24 wherein the resulting molds include ~~features such as at least one of~~ coordinate reference points, ~~and~~ ejector hole locations ~~or other similar design features~~.

27. (Currently Amended) The method of Claim 24 wherein the resulting molds ~~can are adapted to~~ be incorporated into a mold base used for the die casting of materials ~~such as aluminum and zinc~~.

D2

28. (New) The method of claim 26, wherein the resulting molds include coordinate reference points.
29. (New) The method of claim 26, wherein the resulting molds include ejector hole locations.
30. (New) The method of Claim 24 wherein the resulting molds are adapted to be incorporated into a mold base used for the die casting of aluminum materials.
31. (New) The method of Claim 24 wherein the resulting molds are adapted to be incorporated into a mold base used for the die casting of zinc materials.
32. (New) The method of Claim 24 wherein the homogeneous dispersion of ceramic powder or powders in an organic binder comprises approximately 60% by volume of a fine grain alpha aluminum oxide that has been milled to its ultimate crystal size and approximately 40% by volume of a thermoplastic binder mixture.
33. (New) The method of Claim 24 wherein the homogeneous dispersion of ceramic powder or powders in an organic binder comprises approximately 60% by volume of a fine grain alpha aluminum oxide that has been milled to its ultimate crystal size and approximately 40% by volume of a thermoplastic binder mixture, wherein the thermoplastic binder mixture comprises approximately one third by weight of polyethylene, one third by weight of paraffin wax, one third by weight of beeswax.
34. (New) The method of Claim 32 wherein the 60% by volume of a fine grain alpha aluminum oxide is a calcined alumina with an average particle size of less than 0.5 microns.

35. (New) The method of Claim 24 wherein the cavity and core patterns of the mold created at "a" have dimensions approximately 20% greater than the final dimensions of the die block part.

36. (New) The method of Claim 24 wherein processing said green article includes sintering.

37. (New) The method of claim 36 wherein processing said green article comprises shrinking said green articles by about 17%.

38. (New) The method of claim 36 wherein processing said green article comprises shrinking the green articles, wherein the shrinkage is isotropic.

39. (New) The method of Claim 33, further comprising adding stearic acid to the binder mixture.